

# 2010 Utility Annual Report

March 2011

## 2011 Utility Usage Rates Held at 2009 Levels

On December 6 the North Pole City Council passed the 2011 budget. The new budget held 2011 water and sewer use rates at 2009 levels. The per gallon water rate is \$0.01464 and the per gallon sewer rate is \$0.00882. The monthly base water and sewer charges were also held at \$5 each. Utility rates for 2011 are summarized in the table on page 2.

The 2011 budget did increase the utility capital projects rate, also known as the Facility Repair & Replacement (FRR) charge. The City Council approved the rate increase by ordinance in January 2011. The per gallon residential FRR rate for water and sewer will go from \$0.001 to \$0.0015.

Not counting the summer months when water usage increases, the approximate

average water usage for Single Family Residential customers is 3000 gallons per month. The number of people in a household varies widely from a single individual to a large family so water usage varies widely by household.

Based upon an average water usage of 3,000 gallons per month, North Pole utility bills are comparable to College Utilities' bills in Fairbanks. For 3,000 gallons of water usage, in North Pole a utility bill in 2010 was \$86.38. In Fairbanks in 2010 a College Utilities customer's bill based on 3,000 of water usage was \$84.13. The new capital projects charge will increase the average North Pole bill by \$3 to \$89.38 in 2011. Your 2011 utility bill will vary depending upon your actual water use.

## North Pole Utility Benefits from Federal Economic Stimulus

The City of North Pole Utility received \$2,625,222 in Federal Economic Stimulus funding. These awards were received in 2009 and 2010. The awards equaled approximately \$1,300 for every North Pole resident. This \$2.6 million paid for capital projects that utility rate payers would have had to pay for but now they do not.

The Alaska Department of Environmental Conservation (ADEC) awarded the stimulus funds as "loans". Two of the loans had 90% principle forgiveness. Two other loans had 100% principle forgiveness. The repayment cost for the loans was \$222,222, a return of \$11.81 for each dollar spent.

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View of a rehabilitated sewer lift station control panel on 8th Avenue.

## Highlights

- Utility usage rates held at 2009 levels
- Federal stimulus brings over \$2.6 million to North Pole Utility equal to \$1,300 per City resident
- Flint Hills Resources constructed two new drinking water wells for City
- \$3 million lift station rehabilitation estimated to costs utility rate payers only \$150,000

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## 2011 Utility Rates Held at 2009 Levels (continued from page 1)

### 2011 Water and Sewer Utility Rates

Customer class	Water per gallon	Water base	Sewer per gallon	Sewer base	Water capital projects (FRR)	Sewer capital projects (FRR)	Industrial sewer FRR
Single family	\$0.01464	\$5.00	\$0.00882	\$5.00	\$0.0015	\$0.0015	—
Senior single family	\$0.00732	\$5.00	\$0.00441	\$5.00	\$0.0015	\$0.0015	—
Multi-family	\$0.01464	\$25.00	\$0.00882	\$25.00	\$0.0015	\$0.0015	—
Senior multi-family	\$0.00732	\$25.00	\$0.00441	\$25.00	\$0.0015	\$0.0015	—
Commercial	\$0.01464	\$25.00	\$0.00882	\$25.00	\$0.0015	\$0.0015	—
Industrial	\$0.01464	\$25.00	\$0.00882	\$25.00	—	—	\$0.00345

### 2011 Utility Capital Projects Plan

The Utility has two capital projects scheduled for 2011. The first is rehabilitation of 4 sewer lift stations. The Utility will combine State and Environmental Protection Agency grants with Utility cash to fund the project. Because of the grants, a project estimated to cost \$2.7 million should cost utility rate payers less than \$150,000. Utility rate payers are expected to save over \$2.55 million—receiving \$18 for each dollar the Utility spends on the project. When the project is completed, the Utility will have rehabilitated 8 of its 15 sewer lift stations since 2009.

The second capital project scheduled for summer 2011 is de-sludging the lagoons at the waste water treatment plant (WWTP). The Utility uses 4 lagoons to biologically treat the City's waste water. Each lagoon holds approximately 5 million gallons—equal to about 8 Olympic-sized swimming pools. As part of the treatment process solids settle to the bottom of the lagoons. Since the treatment plant was built over 20 years ago only a small amount of sludge was removed. The

volume of accumulated sludge is beginning to negatively affect the treatment process. During the summer in 2011, the Utility plans to remove over 200 dry tons of sludge. A state grant will pay 70% of the estimated \$850,000 project cost. The Utility will pay the balance from funds in its Capital Projects Fund generated from the Facility Repair and Replacement utility charges.

The Utility also plans to conduct 2 engineering projects in 2011. The WWTP is over 20 years old. Its equipment is aging, prone to failure, energy inefficient and uses out dated technology. Sometimes the plant reaches its 500,000 gallons per day discharge permit. Limitations at the treatment works can restrict residential and commercial growth in North Pole. The engineering project will be 100% funded with US Department of Agriculture Rural Development (USDA-RD) and State grants. The Utility will hire an engineering firm to design the rehabilitation of the treatment plant. The Utility estimates the project will cost \$500,000. The engineering analy-

sis and design is the first steps in acquiring grants and loans to rehabilitate the treatment works.

The Utility also plans to conduct an engineering analysis of the water treatment plant (WTP). Like the sewer system project, the Utility estimates the WTP project will cost \$500,000. USDA-RD and State grants will pay 100% of the project costs. The WTP is older than the sewer plant. The water pump replacement project completed in 2010 was a major improvement of the WTP. (See related story, page 1: *North Pole Utility Benefits from Federal Stimulus*.) The Utility's water system is also receiving two new drinking water wells provided at no cost to the Utility by Flint Hills Resources. Flint Hills is providing the new wells to ensure the City's water supply is not contaminated with solfolane. (See related story, page 4: *Update on Sulfolane Ground Water Contamination*.) The engineering project is the first step in acquiring grants and loans to rehabilitate the Utility's water system.

## North Pole Utility Benefits from Federal Economic Stimulus (continued from page 1)

The largest stimulus award was \$1,922,222 received in 2009 for the rehabilitation of 4 sewer lift stations. Rehabilitation of the lift stations began in 2009 and was completed in 2010. If you don't know what a sewer lift station is, it pumps what goes down your drains to the sewer treatment plant. The Utility also received \$239,977 from a state Municipal Matching Grant (MMG) for the project. The loan repayment was \$199,222. It cost the utility rate payers only \$192,222 to rehabilitate 4 lift stations. The typical engineering and construction cost to rehabilitate a single lift station is about ½ million dollars. Stimulus funding and grants saved utility rate payers almost \$2 million.

In



*North Pole Utility's jet vac truck purchased with Federal Economic Stimulus funds.*

2009, the Utility received a \$300,000 stimulus award to purchase a jet vac truck. The jet function of the truck cleans sewer mains using high pressure water. Think of it as a giant power washer. Prior to the Utility buying a jet vac truck the Utility had to hire a private contractor for pumping and jetting jobs. Private contractors cost the Utility thousands of dollars a year in fees. In emergencies the Utility had to rely on the availability of private contractors. When a sewer backs up at 3:00 am on a weekend and it is 40 below it takes a private contractor hours to mobilize, if they are even available. Now the Utility has its own jet vac truck available 24/7. The loan payback for the truck was only \$30,000. This essential piece of equipment cost utility customers only 10 cents on the dollar.

The Utility also received two “green” economic stimulus loans. Green loans were awarded for projects that promote

resource or energy conservation. The federal stimulus funds were awarded through the state with terms of 100% principle forgiveness. In other words these projects did not cost utility rate payers any cash.

The first green loan was for \$100,000 to replace water meters and to provide residential customers with an in-home water meter monitor. Water meters help to promote water conservation. Water conservation reduces water treatment, pumping and sewer treatment costs that in turn help to reduce the need to increase utility rates. The Utility uses water meters for the same reason the gas station charges by the gallon—customers pay for what they use. A flat rate charge for water penalizes customers who conserve water and subsidizes people who waste water.

How much water do you use to take a shower, wash a load of laundry or flush a toilet? Knowing how much water you use can help you make informed decisions. Most residential water meters are located in hard to reach places like a crawl space. The stimulus loan paid for North Pole residential utility customers to receive an in-home water meter monitor. With the water meter monitor, you can easily see how much water you use.

The second green stimulus loan was for \$600,000 to replace aging pumps in the water treatment plant. The pumps in the plant were over 20 years old and energy inefficient. The new pumps have variable frequency drives so they can be sped up or slowed down based upon need which saves energy. The pump project also included new electronic controls to manage the pumps to ensure they pump efficiently based upon customer water demand.



*New pumps installed at water treatment plant as part of a Federal Economic Stimulus funded project.*

## Update on Sulfolane Ground Water Contamination

In September 2009, the City first learned that there may be ground water contamination originating from the Flint Hills Resources (FHR) North Pole refinery. Test wells drilled in October and November 2009 found ground water contamination by the industrial compound sulfolane.

FHR took a proactive approach and quickly announced the contamination and provided bottled water to all households and businesses whose well water was contaminated with sulfolane. Within the North Pole city limits approximately 30 households had drinking water wells contaminated with sulfolane. FHR invested approximately \$2 million to extend city water service to these households at no cost to the homeowners or to the Utility.

The Utility's drinking water wells were on the edge of the contaminated ground water plume. The Utility found sulfolane levels in the city wells at levels less than 5 parts per billion. That is like five drops of water in an Olympic-size swimming pool. The Utility's treatment process removed the sulfolane to levels where it could not be detected by the State Environmental Health Laboratory. To ensure the



*Interior of well house built by Flint Hills Resources as part of their effort to provide two new drinking water wells for the City.*

City's water supply was free of sulfolane, FHR drilled the Utility two new drinking water wells. The wells were projected to be completed in March 2011. Providing the Utility with new drinking water wells cost FHR over \$2 million.

## 2011 Utility Budget

The City of North Pole Utility is an enterprise fund. As the name implies, the Utility is suppose to operate like a business. This means the Utility's revenues should pay for operating expenses and depreciation of its capital assets. Prior to 2009, utility revenues covered operational costs; however, utility rates were not earning enough revenue to address depreciating capital assets. The Utility has a backlog of approximately \$25 million of needed capital improvements.

Beginning in 2009, the Utility changed how it determined rates. The City Council also adopted a new utility rate for residential and commercial customers earmarked for capital expenses. The new rate is called Facility Repair and Replacement (FRR). The Utility has

charged industrial customers a FRR for over 20 years. The 2009 change in rates included a reduction in the monthly residential base charges and dedicated these monthly base charges to the Utility Capital fund.

### Comparison of 2010 Revenues and Expenditures vs. 2011 Budget

<b>Water 2010</b>		<b>Sewer 2010</b>		<b>Total 2010</b>	
Revenues	\$856,812.93	Revenues	\$898,898.33	Revenues	\$1,755,711.26
Expenses	\$821,338.86	Expenses	\$947,439.27	Expenses	\$1,768,778.13
Balance	\$35,474.07	Balance	(\$48,540.94)	Balance	(\$13,066.87)
<b>Water 2011</b>		<b>Sewer 2011</b>		<b>Total 2011</b>	
Revenues	\$910,611	Revenues	\$1,042,997	Revenues	\$1,953,608
Expenses	\$910,611	Expenses	\$1,042,997	Expenses	\$1,953,608
Balance	\$0	Balance	\$0	Balance	\$0